FIG. 1

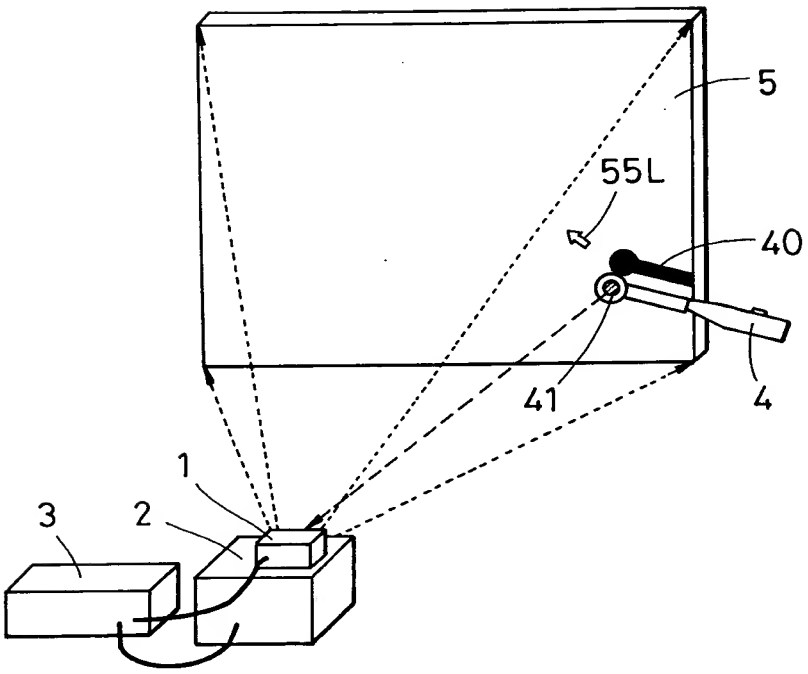


FIG. 2

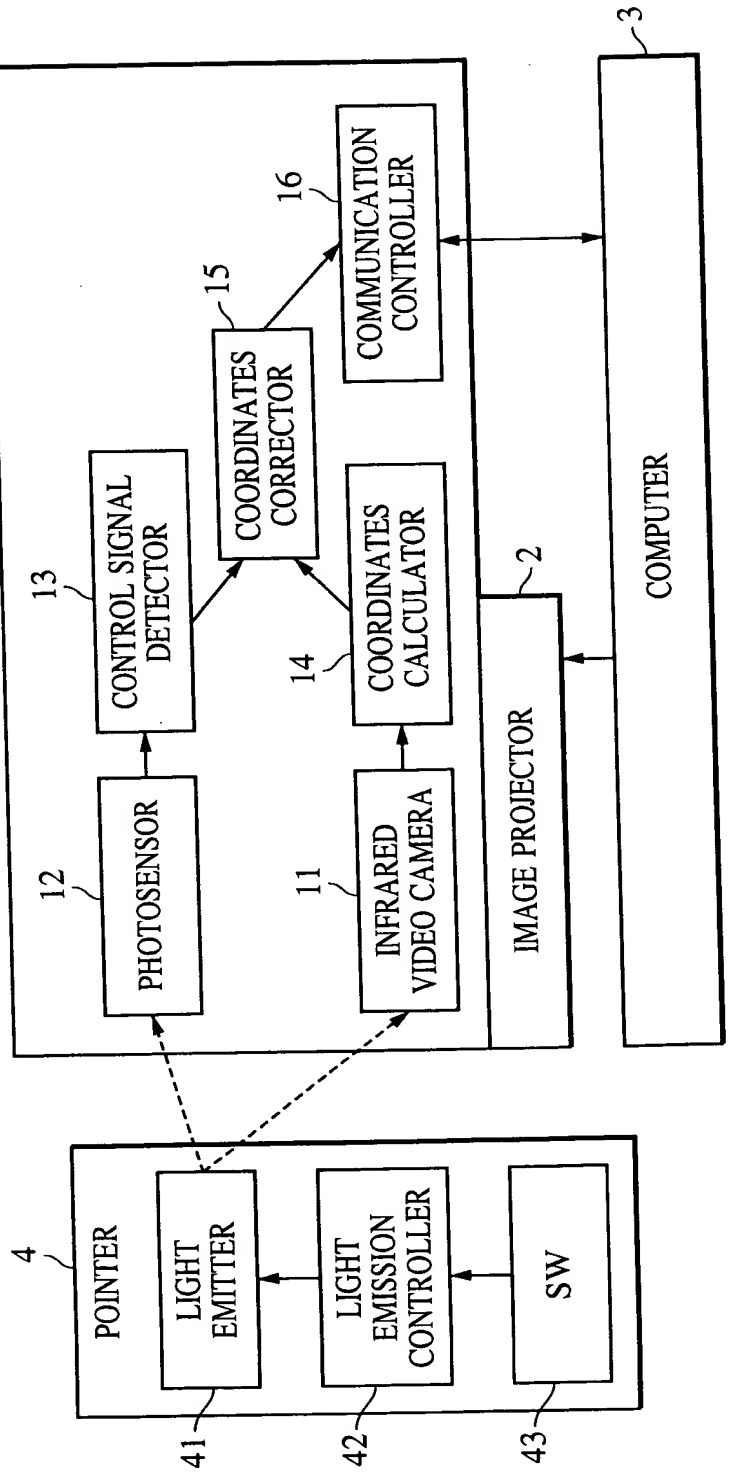
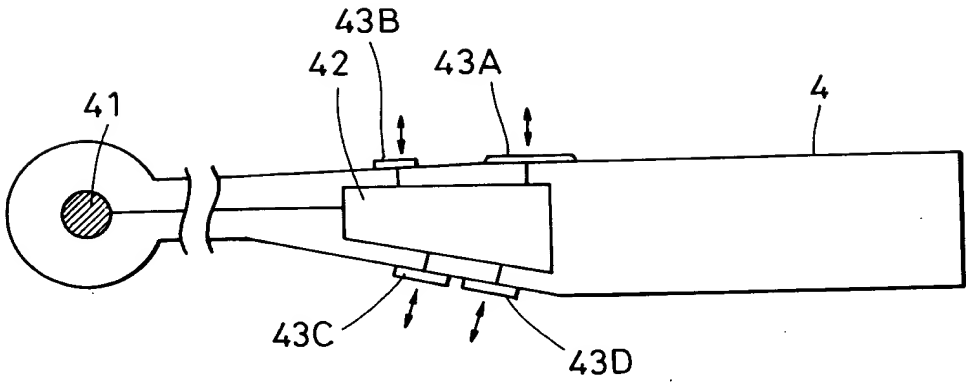

1
3
COMMUNICATION CONTROLLER
16
15
COORDINATES CORRECTOR
CONTROL SIGNAL DETECTOR
13
14
COORDINATES CALCULATOR
12
PHOTOSENSOR
11
INFRARED VIDEO CAMERA
2
IMAGE PROJECTOR
COMPUTER
4
POINTER
LIGHT EMITTER
LIGHT EMISSION CONTROLLER
SW
41
42
43

FIG. 3



EP 0 971 270 A1 99050660

FIG. 4

SWITCH A	SWITCH B	SWITCH C	SWITCH D	EMISSION	PEN DOWN	PEN BUTTON	CURSOR
×	×	–	–	OFF	OFF	OFF	–
○	×	×	×	ON	OFF	OFF	–
○	×	○	×	ON	ON	OFF	–
○	×	×	○	ON	OFF	ON	–
○	×	○	○	ON	ON	ON	–
–	○	○	×	ON	OFF	OFF	LEFT
–	○	×	○	ON	OFF	OFF	RIGHT

FIG. 5

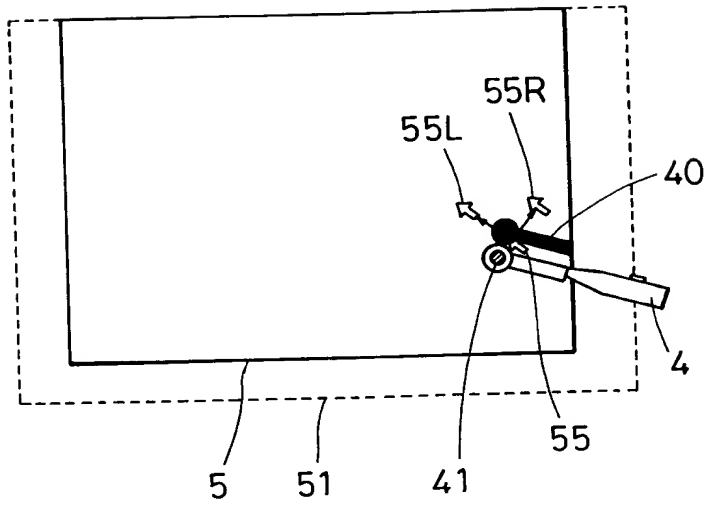


FIG. 6A

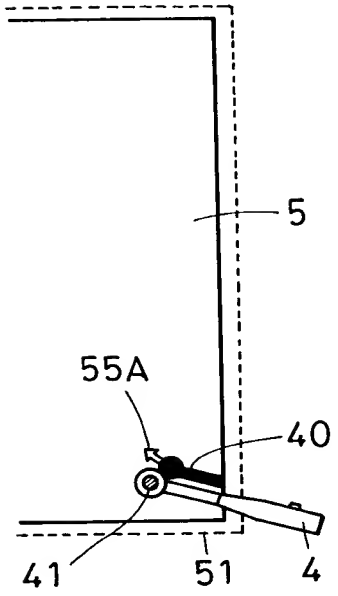


FIG. 6B

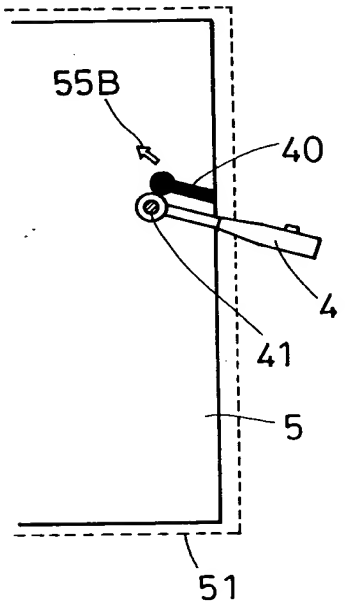


FIG. 7

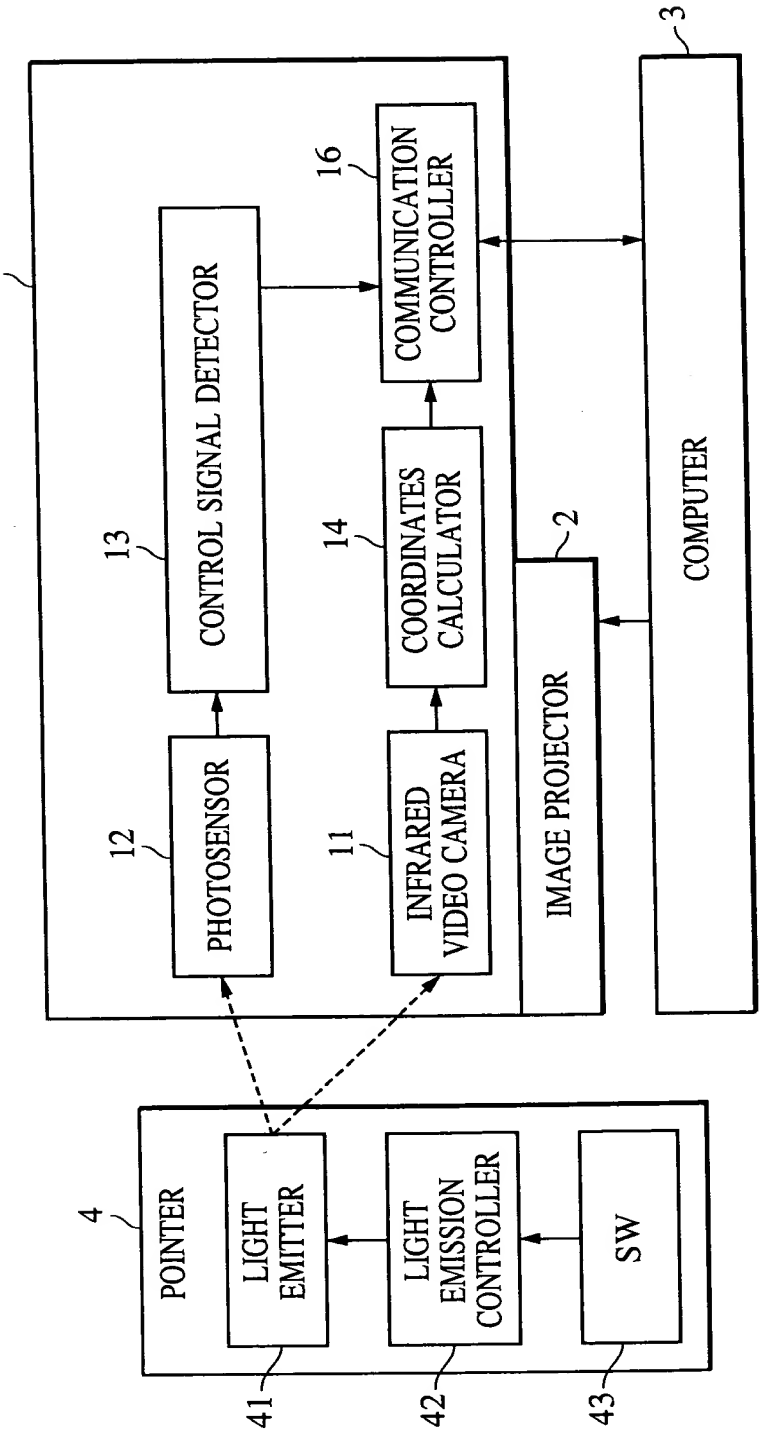

1
3
16
COMMUNICATION CONTROLLER
13
CONTROL SIGNAL DETECTOR
14
COORDINATES CALCULATOR
12
PHOTOSENSOR
11
INFRARED VIDEO CAMERA
2
IMAGE PROJECTOR
COMPUTER
4
POINTER
LIGHT EMITTER
LIGHT EMISSION CONTROLLER
SW
41
42
43

FIG. 8

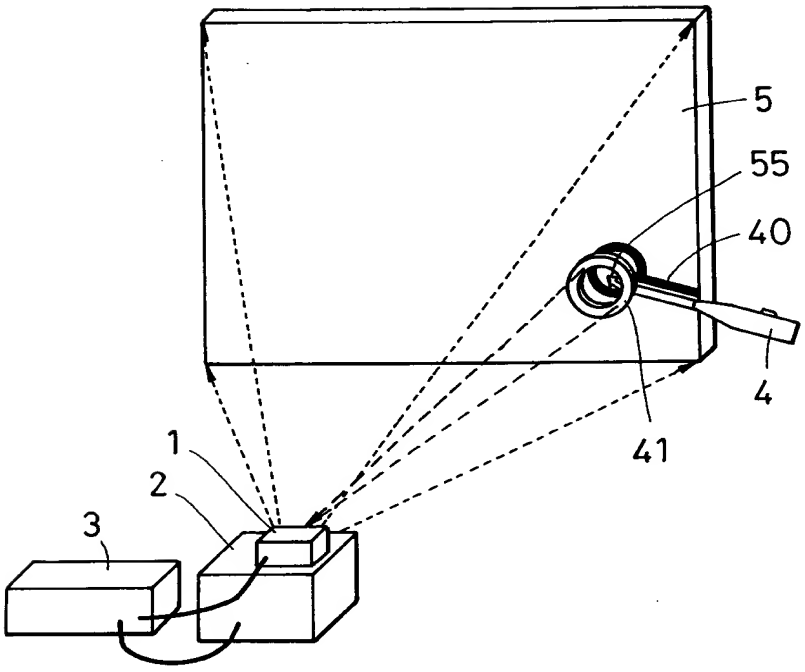


FIG. 9

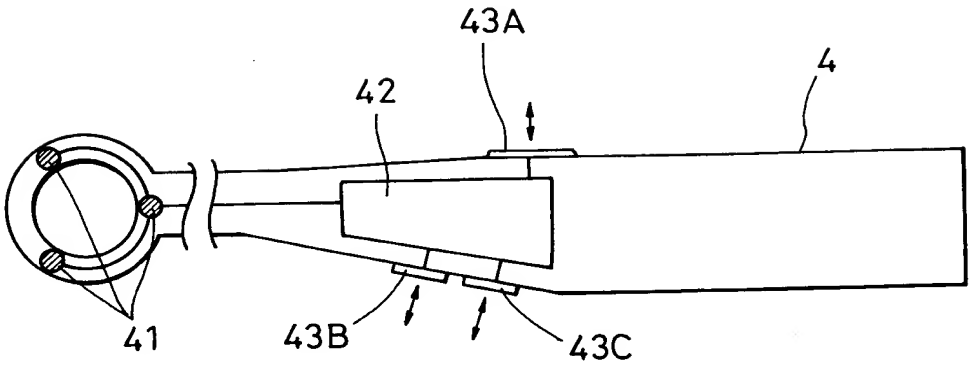


FIG. 10

SWITCH A	SWITCH B	SWITCH C	EMISSION	PEN DOWN	PEN BUTTON
×	–	–	OFF	OFF	OFF
○	×	×	ON	OFF	OFF
○	○	×	ON	ON	OFF
○	×	○	ON	OFF	ON
○	○	○	ON	ON	ON

FIG. 11A

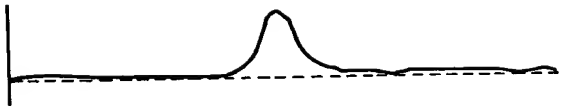


FIG. 11B

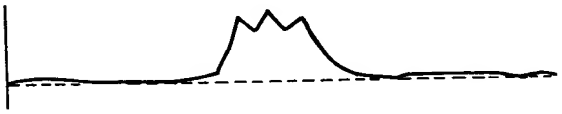


FIG. 11C

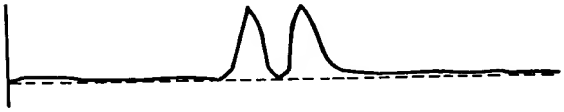


FIG. 12

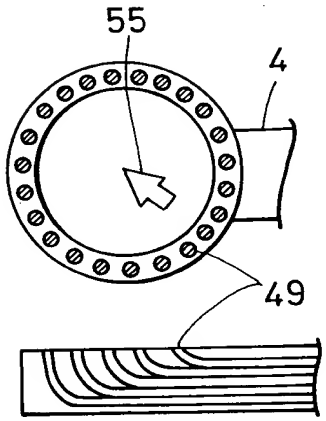


FIG. 13

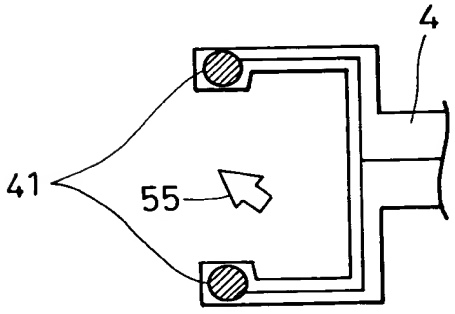


FIG. 14

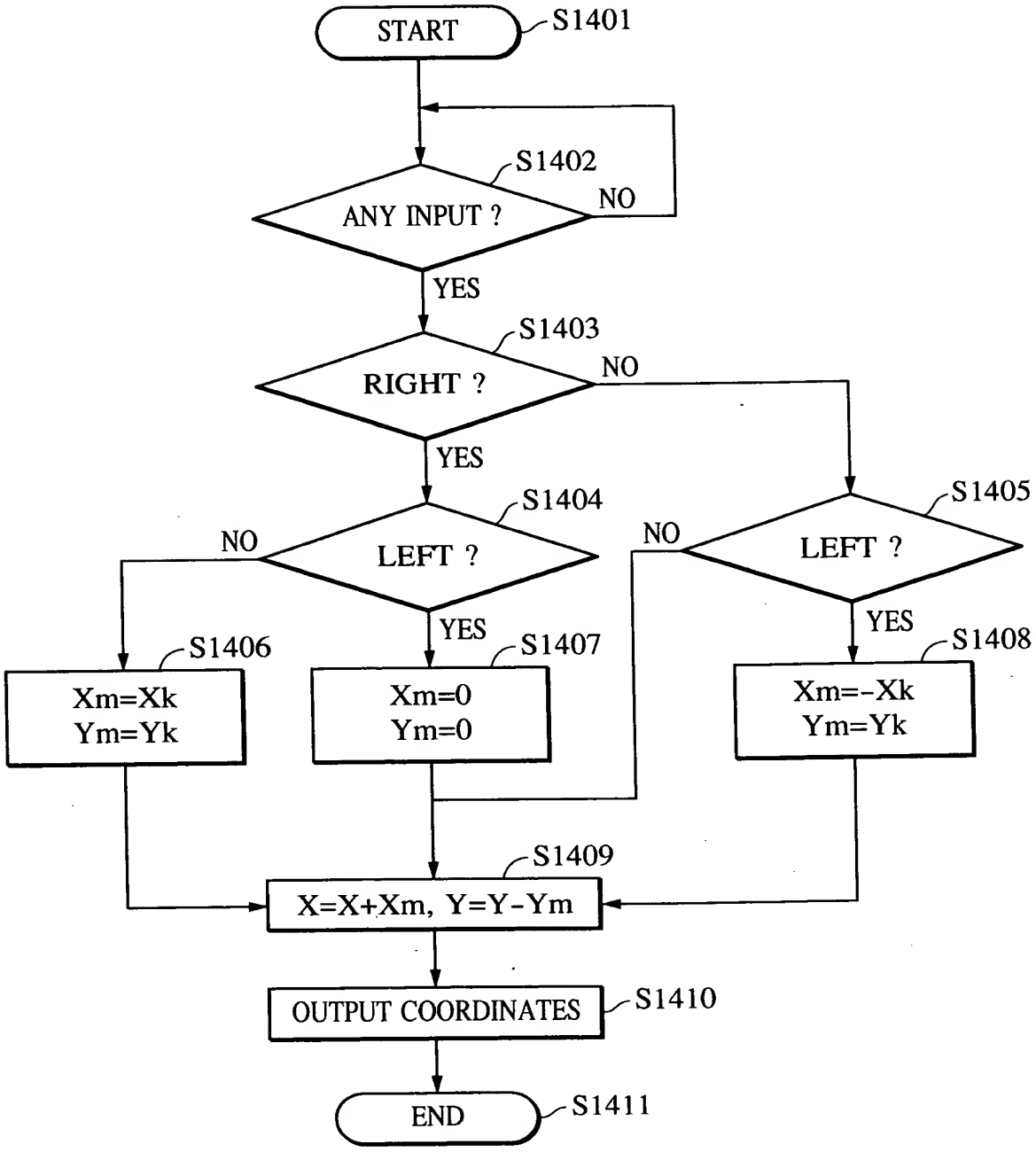

START
S1401
S1402
ANY INPUT ?
NO
YES
S1403
RIGHT ?
NO
YES
S1404
LEFT ?
NO
YES
S1405
LEFT ?
NO
YES
S1406
Xm=Xk
Ym=Yk
S1407
Xm=0
Ym=0
S1408
Xm=-Xk
Ym=Yk
S1409
X=X+Xm, Y=Y-Ym
OUTPUT COORDINATES
S1410
END
S1411

FIG. 15

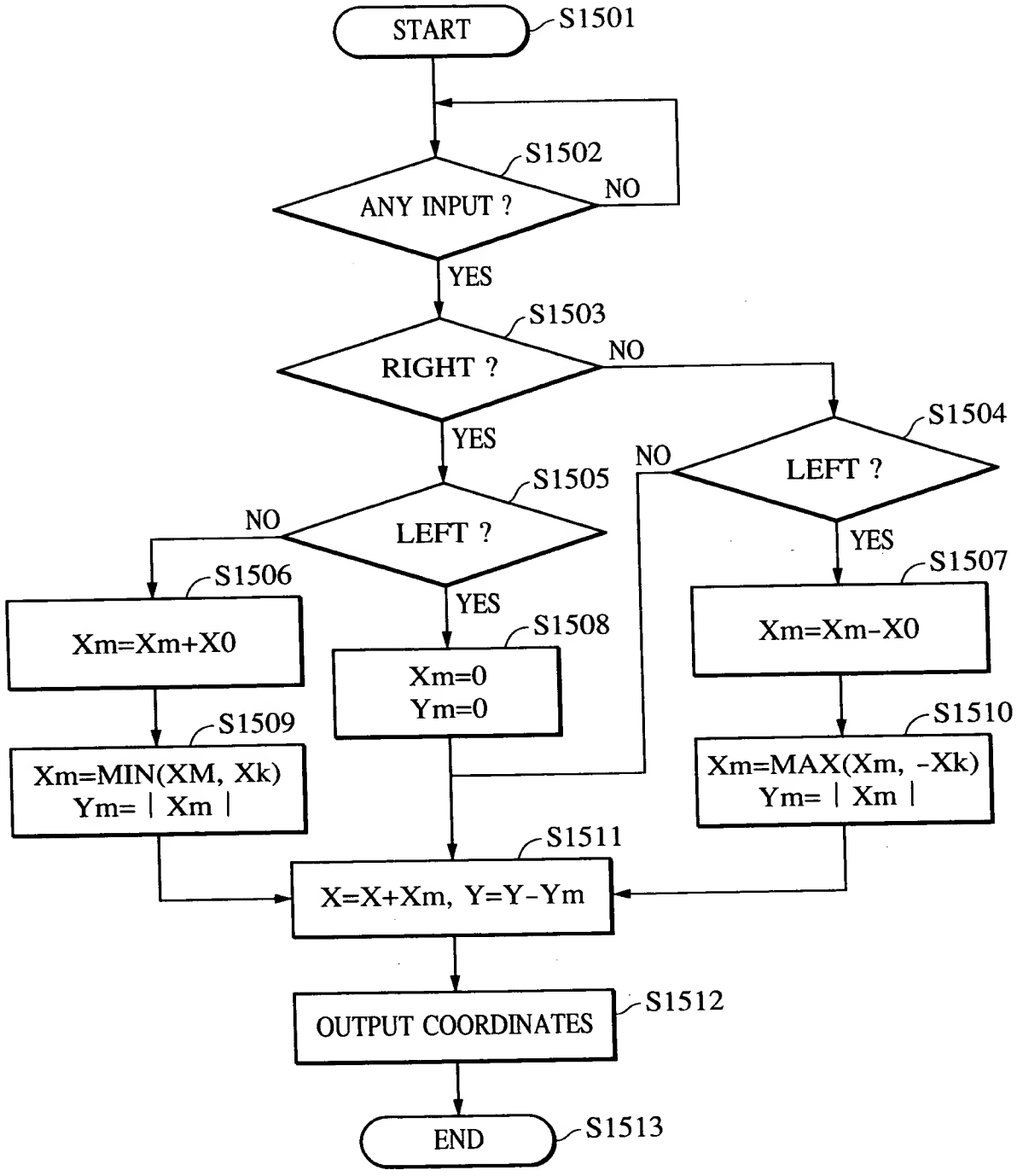

START
S1501
S1502
ANY INPUT ?
NO
YES
S1503
RIGHT ?
NO
YES
S1504
LEFT ?
NO
YES
S1505
LEFT ?
NO
YES
S1506
Xm=Xm+X0
S1507
Xm=Xm-X0
S1508
Xm=0
Ym=0
S1509
Xm=MIN(XM, Xk)
Ym= | Xm |
S1510
Xm=MAX(Xm, -Xk)
Ym= | Xm |
S1511
X=X+Xm, Y=Y-Ym
S1512
OUTPUT COORDINATES
END
S1513

FIG. 16

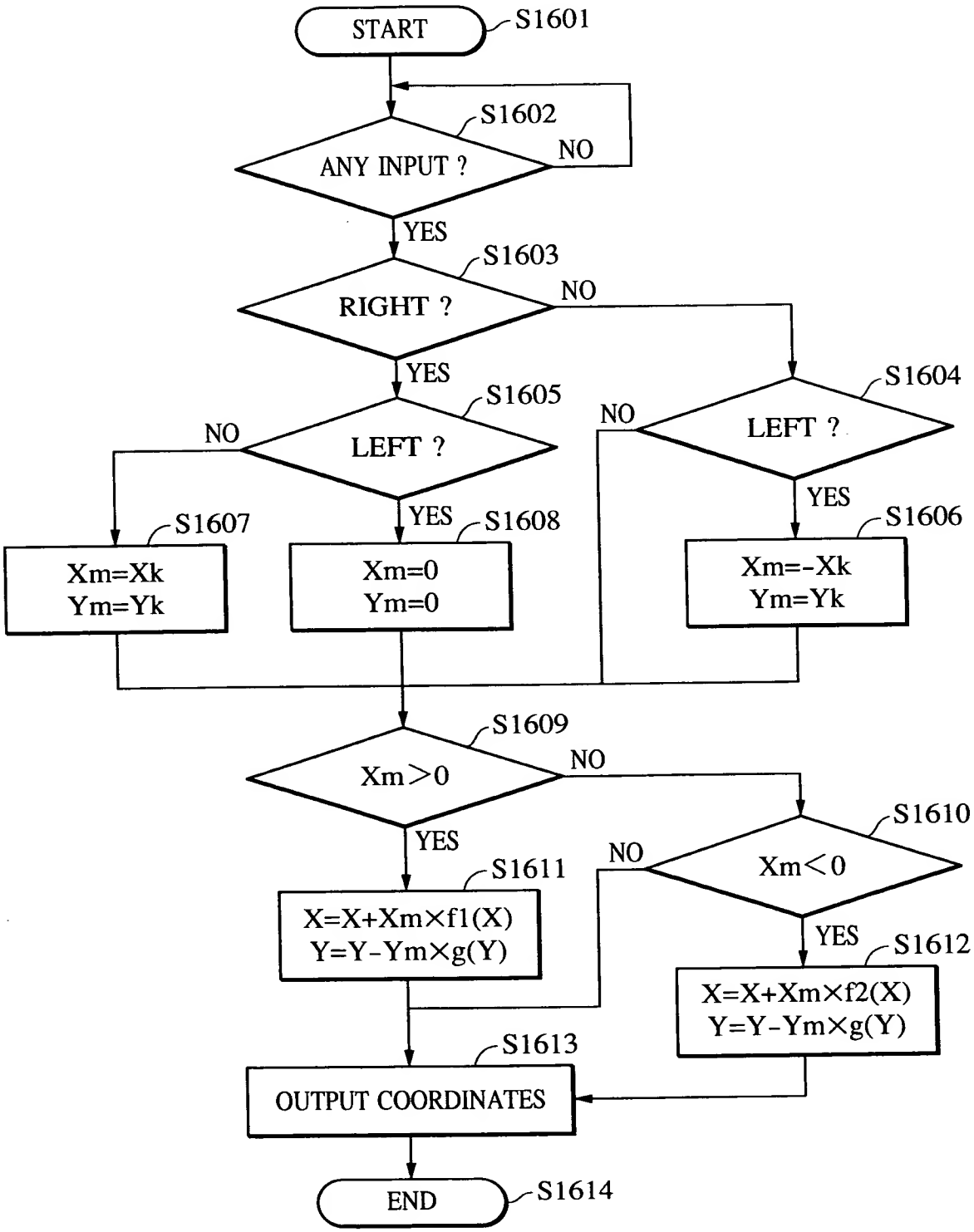

START
S1601
S1602
ANY INPUT ?
NO
YES
S1603
RIGHT ?
NO
YES
S1604
LEFT ?
NO
YES
S1605
LEFT ?
NO
YES
S1606
Xm=-Xk
Ym=Yk
S1607
Xm=Xk
Ym=Yk
S1608
Xm=0
Ym=0
S1609
Xm>0
NO
YES
S1610
Xm<0
NO
YES
S1611
X=X+Xm×f1(X)
Y=Y-Ym×g(Y)
S1612
X=X+Xm×f2(X)
Y=Y-Ym×g(Y)
S1613
OUTPUT COORDINATES
END
S1614

FIG. 17

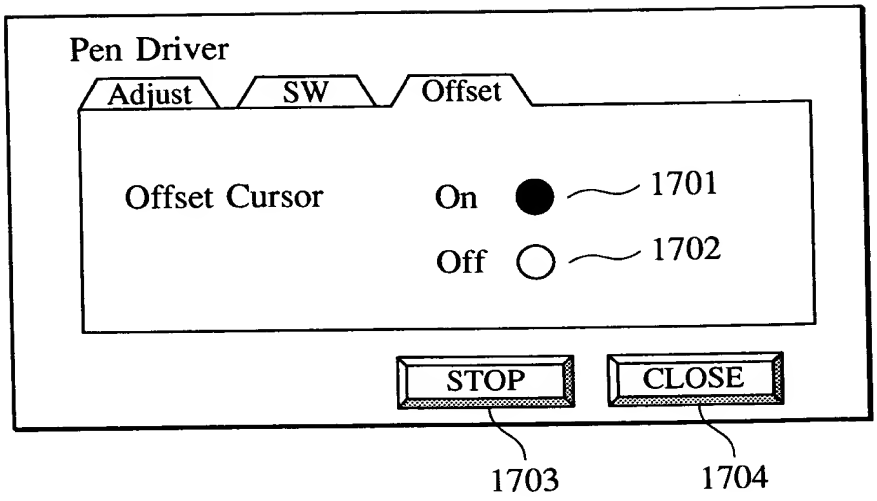

Pen Driver
Adjust
SW
Offset
Offset Cursor
On
1701
Off
1702
STOP
CLOSE
1703
1704

FIG. 18

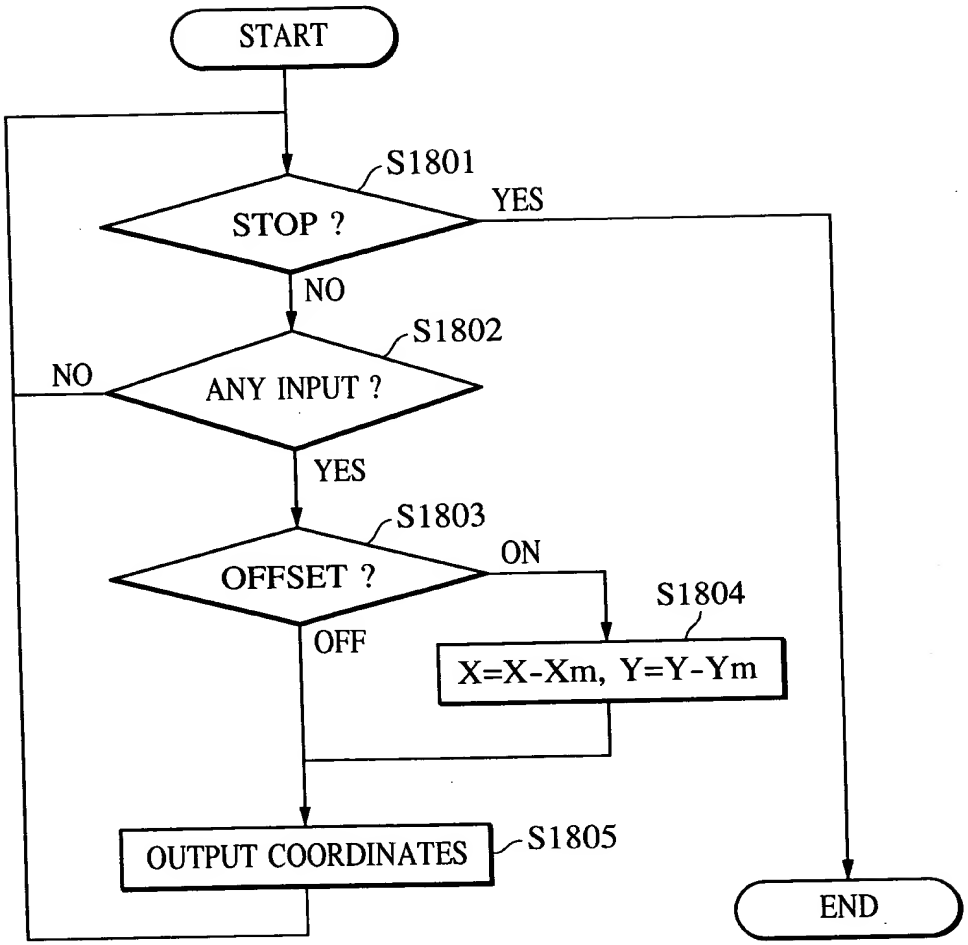
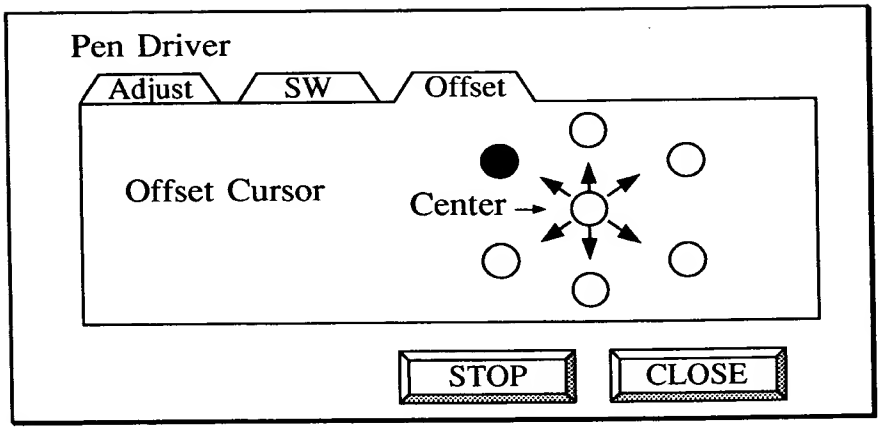

START
S1801
STOP ?
YES
NO
S1802
NO
ANY INPUT ?
YES
S1803
OFFSET ?
ON
S1804
OFF
X=X-Xm, Y=Y-Ym
OUTPUT COORDINATES
S1805
END

FIG. 19


Pen Driver
Adjust
SW
Offset
Offset Cursor
Center
STOP
CLOSE